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Safety Information

Do

- Read, keep, and follow these instructions.
- Heed all warnings.
- Turn off and unplug the power plug from the AC outlet before cleaning the unit.
- Use a soft dry cloth with mild detergent to clean the display housing.
- Only use attachments/accessories specified by the manufacturer.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Do Not

- Use this apparatus near water.
- Use abrasive cleaners, waxes or solvents to clean the unit.
- Install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture.
- Open or disassemble the unit as this may cause electric shock.
- Near any appliance generating a strong magnetic field.
- Use in direct sunlight.
- To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture. Dangerous high voltages are present inside the enclosure. Do not open the cabinet. Refer servicing to qualified personnel only.

Class B emissions limits

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Viewing 3D PROJECTOR using the 3D function

IMPORTANT SAFETY INFORMATION. READ THE FOLLOWING WARNINGS BEFORE YOU OR YOUR CHILD USE THE 3D FUNCTION

Warning

- ❖ Children and teenagers may be more susceptible to health issues associated with viewing in 3D and should be closely supervised when viewing these images.

Photosensitive Seizure Warning and Other Health Risks

- ❖ Some viewers may experience an epileptic seizure or stroke when exposed to certain flashing images or lights contained in certain Projector pictures or video games. If you suffer from, or have a family history of epilepsy or strokes, please consult with a medical specialist before using the 3D function.
- ❖ Even those without a personal or family history of epilepsy or stroke may have an undiagnosed condition that can cause photosensitive epileptic seizures.
- ❖ Pregnant women, the elderly, sufferers of serious medical conditions, those who are sleep deprived or under the influence of alcohol should avoid utilizing the unit's 3D functionality.
- ❖ If you experience any of the following symptoms, stop viewing 3D pictures immediately and consult a medical specialist: (1) altered vision; (2) light-headedness; (3) dizziness; (4) involuntary movements such as eye or muscle twitching; (5) confusion; (6) nausea; (7) loss of awareness; (8) convulsions; (9) cramps; and/ or (10) disorientation. Children and teenagers may be more likely than adults to experience these symptoms. Parents should monitor their children and ask whether they are experiencing these symptoms.
- ❖ Viewing 3D PROJECTOR may also cause motion sickness, perceptual after effects, disorientation, eye strain and decreased postural stability. It is recommended that users take frequent breaks to lessen the potential of these effects. If your eyes show signs of fatigue or dryness or if you have any of the above symptoms, immediately discontinue use of this device and do not resume using it for at least thirty minutes after the symptoms have subsided.
- ❖ Watching 3D PROJECTOR while sitting too close to the screen for an extended period of time may damage your eyesight. The ideal viewing distance should be at least three times the screen height. It is recommended that the viewer's eyes are level with the screen.
- ❖ Watching 3D PROJECTOR while wearing 3D glasses for an extended period of time may cause a headache or fatigue. If you experience a headache, fatigue or dizziness, stop viewing 3D PROJECTOR and rest.
- ❖ Do not use the 3D glasses for any other purpose than for viewing 3D PROJECTOR. Wearing the 3D glasses for any other purpose (as general spectacles, sunglasses, protective goggles, etc.) may be physically harmful to you and may weaken your eyesight.
- ❖ Viewing in 3D may cause disorientation for some viewers. Accordingly, DO NOT place your 3D PROJECTOR near open stairwells, cables, balconies, or other objects that can be tripped over, run into, knocked down, broken or fallen over.

Features

- Convert 3D video from several popular formats for display on DLP-Link 3D ready projectors.
- Compatible with HDMI 1.4a 3D formats including side-by-side, etc.
- Pass 2D images unaltered for normal display.
- Environment conditions:
 - Temperature:
 - * Operating: 5°C ~ 40°C (41°F ~ 104°F)
 - * Non-operating: -20°C ~ 60°C (-4°F ~ 140°F)
 - Altitude:
 - * Operating: Sea level to 10,000 feet
 - * Non-operating: Sea Level to 30,000 feet

Package Overview

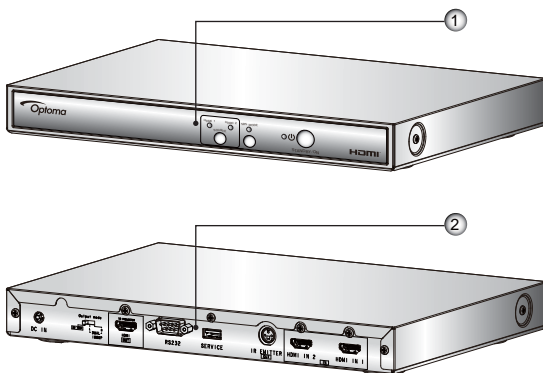
The following parts are included in the carton.(*)

- 3D projector adapter
- 3D glasses
- Battery (CR2032)
- Power plug and power adapter
- Interchangeable nosepieces (large, small)
- User's guide (CD)
- Quick start card
- Warranty card
- WEEE card



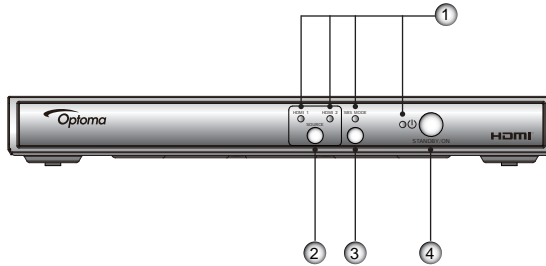
❖ Due to different applications in each country, some regions may have different accessories.

Product Overview



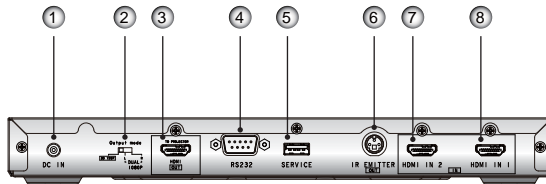
1. Front Side: Control panel and LED indicators
2. Back Side: Input / Output and switch panel

Control Panel



1. LED indicators: Include HDMI 1, HDMI 2, SBS MODE and Power LEDs.
2. Source button: Allow manual selection of source.
3. SBS MODE button: Allow manual selection of 3D format conversion.
4. Power button (STANDBY/ON): Control the system power.

I/O and Switch Panel



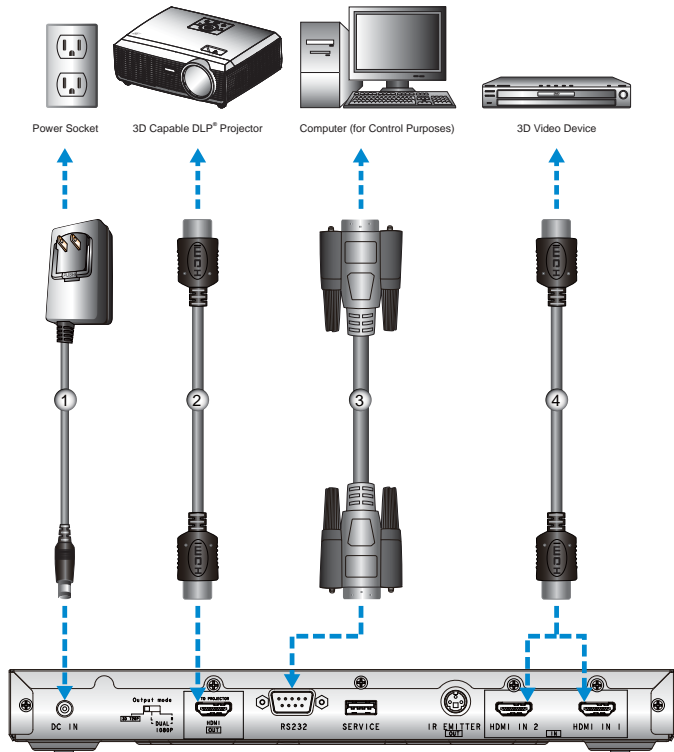
1. DC power input
2. Output mode (3D 720p / 1080p L / 1080p R)
3. HDMI OUT (TO PROJECTOR)
4. RS232
5. SERVICE
6. IR EMITTER (OUT)
7. HDMI IN 2
8. HDMI IN 1

LED Indicators

1. Power LED is bi-color (Green and Red).
2. SBS MODE LED is green when this feature is selected.
3. HDMI 1 LED is green when this input source is selected and detected.
4. HDMI 2 LED is green when this input source is selected and detected.

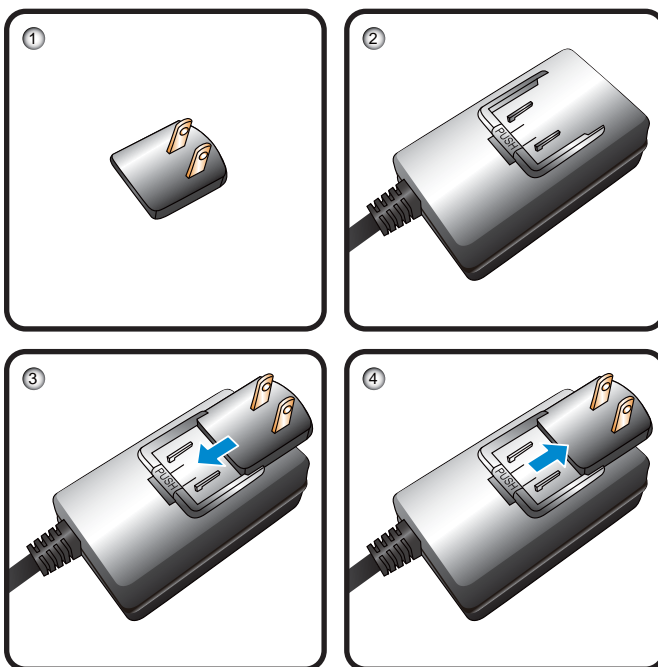
Message	Power LED (Red)	Power LED (Green)	SBS MODE (Green)	HDMI 1 (Green)	HDMI 2 (Green)
Standby state (Input power cord)	Steady light	Off	Off	Off	Off
Power on	Off	Steady light	Off	Off	Off
Power on & HDMI 1 source is selected but source is searching	Off	Steady light	Off	Flashing 0.5 sec. off 0.5 sec. on	Off
Power on & HDMI 2 source is selected but source is searching	Off	Steady light	Off	Off	Flashing 0.5 sec. off 0.5 sec. on
Power on & HDMI 1 source is selected and source is found	Off	Steady light	Off	Steady light	Off
Power on & HDMI 2 source is selected and source is found	Off	Steady light	Off	Off	Steady light
Power on & HDMI 1 is found & SBS mode is "Off"	Off	Steady light	Off	Steady light	Off
Power on & HDMI 2 is found & SBS mode is "Off"	Off	Steady light	Off	Off	Steady light
Power on & HDMI 1 is found & SBS mode is "On"	Off	Steady light	Steady light	Steady light	Off
Power on & HDMI 2 is found & SBS mode is "On"	Off	Steady light	Steady light	Off	Steady light

Connecting to the Devices



1. Power adapter
2. HDMI cable (OUT)
3. RS232 cable
4. HDMI cable (IN)

Installing the Power Plug



1. Power plug
2. Power adapter
3. Slide the power plug into the power adapter in the direction of the arrow until it clicks.
4. Press the "PUSH" button and push the power plug in the direction of the arrow to remove it.

Using the 3D Projector Adapter



- ❖ The 3D video source device must be powered on before the 3D projector adapter.

Once you have connected your devices together with HDMI cables, as shown in the diagram, you are ready to begin. Power ON your 3D video source, 3D projector adapter and your 3D projector.(*)

PlayStation® 3 Games

- Make sure that you have updated your console to the latest software version in PlayStation® 3.
- Go to the “Settings menu -> Display settings -> Video output -> HDMI”. Select “Automatic” and follow the on-screen instructions.
- Insert your 3D game disc. Alternatively you can download games (and 3D updates) via the PlayStation® network.
- Launch the game. In the in-game menu, select “Play in 3D”.

3D Blu-ray™ Player

- Make sure that your player can support 3D Blu-ray™ disc and that 3D output is enabled.
- Insert the 3D Blu-ray™ disc into the player, press “Play”.

3D TV (e.g. SKY 3D)

- Contact your TV service provider to enable any 3D channels on your channel package.
- Once enabled, switch to the 3D channel.
 - You should see two images side-by-side.
- Press the “SBS Mode” button on the front of the 3D projector adapter.(*)

3D Device (e.g. 3D DV/DC) with 2D 1080i side by side signal output

- Connect your 3D device and switch to out 3D content with 2D side-by-side output to 3D Projector Adapter.
 - You should see two images side-by-side.
- Press the “SBS Mode” button on the front of the 3D projector adapter.

When you see “3D” in the top right hand corner of the screen, enable your projector’s 3D mode, turn on your 3D glasses and put them on.

If necessary, use your projector’s 3D Sync-Invert option to optimize your 3D experience. The option is located in the “Display” section of the projector OSD menu.

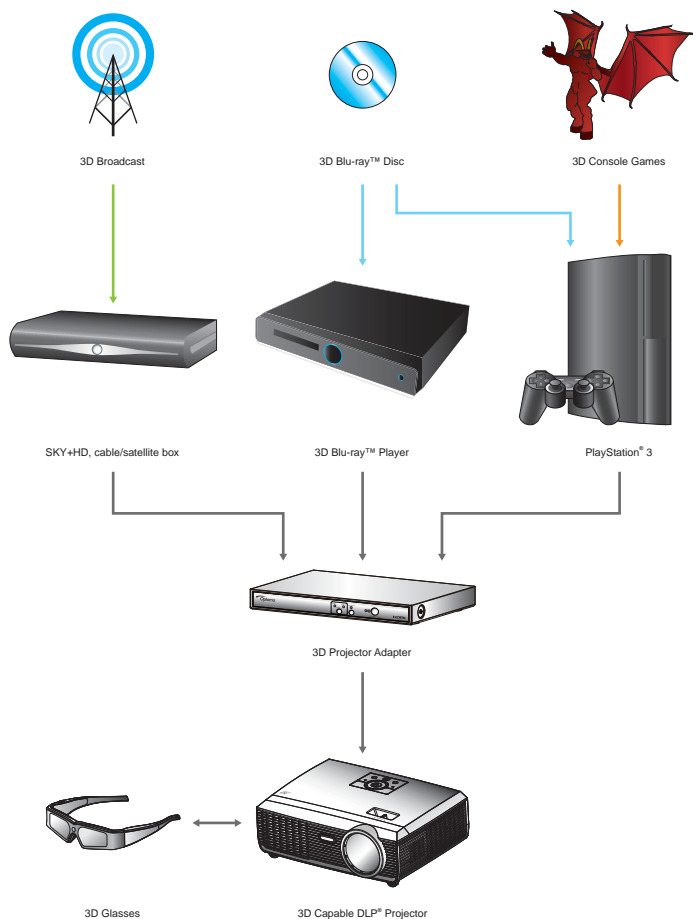


- ❖ If input video is normal 2D, please press SBS mode to “Off”.
- ❖ If SBS mode is active, 2D video content will not display correctly.

3D Projector Adapter has been tested by Optoma as of 09/25/2010 that is compatible with some other types of source devices launched before such date, ex. PlayStation® 3, 3D Blu-ray, 3D TV source device with 3D technology incorporated. Compatibility with other manufacturer's DLP display devices (see Optoma website for info) has been tested as of Oct. 2010. Due to variations in hardware and firmware version(s) throughout a product's lifecycle, Optoma cannot guarantee compatibility with models and source devices supplied by other manufacturers.

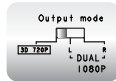
All other product names, company names and trade names used herein are for identifications purposes only and may be trademarks or registered trademarks of their respective owners. All images have been simulated.

User Controls



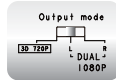
All other product names, company names and trade names used herein are for identifications purposes only and may be trademarks or registered trademarks of their respective owners. All images have been simulated.

- Switch the “Output Mode” to change output signal.

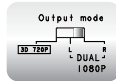


3D 720p (Default value): When input 3D signal, system will output HQFS signal @120Hz.

- Switch the “Output Mode” to change output signal in two 3D Projector Adapters applications.



L: When input 3D signal, system will output 1080p@60hz(L) signal.



R: When input 3D signal, system will output 1080p@60hz(R) signal.

Using the 3D Glasses(*)



❖ For more detailed information, please refer to the 3D glasses user's guide.

1. To turn ON 3D glasses: Press the “Power” button and the LED will flash one time indicating the glasses are ready to use 3D mode.
2. Verify that 3D content is being sent to the projector and signal is compatible with projector specifications.
3. Turn on “3D Mode” (DLP-Link) in projector OSD menu. 3D mode is located in the “Display” section.
4. Turn on 3D glasses and verify image appears in 3D without eyestrain.
5. If the image does not appear in 3D, please check 3D device set up well to send out 3D image or not. Or SBS mode should turn on when input signal is 2D 1080i side-by-side and repeat previous steps 1 ~ 4.
6. If necessary, use your projector's 3D Sync-Invert option to optimize your 3D experience. The option is located in the “Display” section of the projector OSD menu.
7. For additional setup information, please refer to the projector user's guide, or manufacturer's Website.
8. To turn OFF 3D glasses: Press the “Power” button and hold until the LED switches off.

Trouble Shooting

- ❓ No image appears on screen.
 - ▶ Ensure all the cables and power connections are correctly and securely connected as described in the “Installation” section.
 - ▶ Ensure all the pins of connectors are not bent or broken.
 - ▶ Make sure you have powered on all the devices.
- ❓ Blurry double image.
 - ▶ Press “SBS Mode” button to “Off” to avoid normal 2D image is blurry double image.
- ❓ Two images, side-by-side format.
 - ▶ Press “SBS Mode” button to “On” for input signal is HDMI 1.3 2D 1080i side-by-side.
- ❓ Pseudo-3D Image or uncomfortable depth of field inside the image.
 - ▶ Use you projector’s “3D Sync. Invert” option.
- ❓ Image does not display in 3D.
 - ▶ Check if the battery of 3D glasses is drained.
 - ▶ Check if the 3D glasses is turned on.
 - ▶ Check if the 3D mode (DLP-Link) of projector is turned on. 3D mode is located in the “Display” section of OSD menu.
 - ▶ Check if the “Output Mode” on the 3D projector adapter is switched to 3D 720p.
 - ▶ When the input signal is HDMI 1.3 2D (1080i side-by-side half), turn on the “SBS Mode” on the 3D projector adapter.
- ❓ My 3D glasses do not operate.
 - ▶ Replace the battery if it is drained.
 - ▶ Focus your 3D glasses toward the projector front. Make sure that the distance from the projector to the glasses is less than 20 feet in a straight line.
- ❓ The LED on 3D glasses blinks continually.
 - ▶ The battery is drained. Replace it with a new one.

Compatibility Modes

Video Compatibility

Video Input Resolutions			Video Output Resolutions	
HDMI 1.4a (3D)	1280 X 720p @ 50Hz	Top-and-Bottom	720p @ 120 Hz	Output mode is 3D 720p.
	1280 X 720p @ 60Hz	Top-and-Bottom		
	1280 X 720p @ 50Hz	Frame packing		
	1280 X 720p @ 60Hz	Frame packing		
	1920 X 1080i @ 50 Hz	Side-by-Side (Half)		
	1920 X 1080i @ 60 Hz	Side-by-Side (Half)		
	1920 X 1080p @ 24 Hz	Top-and-Bottom		
	1920 X 1080p @ 24 Hz	Frame packing		
HDMI 1.4a (3D)	1280 X 720p @ 50Hz	Top-and-Bottom	1080p @ 60 Hz	Output mode is 1080p L / R for dual 1080p (application).
	1280 X 720p @ 60Hz	Top-and-Bottom		
	1280 X 720p @ 50Hz	Frame packing		
	1280 X 720p @ 60Hz	Frame packing		
	1920 X 1080i @ 50 Hz	Side-by-Side (Half)		
	1920 X 1080i @ 60 Hz	Side-by-Side (Half)		
	1920 X 1080p @ 24 Hz	Top-and-Bottom		
	1920 X 1080p @ 24 Hz	Frame packing		
HDMI 1.3 (2D)	1920 x 1080i @ 50Hz	Side-by-Side (Half)	720p @ 120 Hz	Output mode is 3D 720p for HDMI 1.3 2D (1080i side-by-side half) to 3D with SBS mode is "On".
	1920 x 1080i @ 60Hz	Side-by-Side (Half)	720p @ 120 Hz	
	1920 x 1080i @ 50Hz	Side-by-Side (Half)	1080p @ 60 Hz	
	1920 x 1080i @ 60Hz	Side-by-Side (Half)	1080p @ 60 Hz	Output mode is 1080p L / R for dual 1080p (application); For HDMI 1.3 2D (1080i side-by-side half) to 3D with SBS mode is "On".
	480i	Pure 2D Timing	480p	
	480p	Pure 2D Timing	480p	
	576i	Pure 2D Timing	576p	
	576p	Pure 2D Timing	576p	
	720p (50/60Hz)	Pure 2D Timing	720p (50/60Hz)	
	1080i (50/60Hz)	Pure 2D Timing	1080p (50/60Hz)	
	1080p (24/50/60Hz)	Pure 2D Timing	1080p (24/50/60Hz)	

Computer Compatibility

Computer Input Resolutions	Computer Output Resolutions
640 x 480 @ 60Hz	640 x 480 @ 60Hz
800 x 600 @ 60Hz	800 x 600 @ 60Hz
1024 x 768 @ 60Hz	1024 x 768 @ 60Hz
1280 x 720 @ 60Hz	1280 x 720 @ 60Hz
1280 x 800 @ 60Hz	1280 x 800 @ 60Hz
1280 x 1024 @ 60Hz	1280 x 1024 @ 60Hz
1400 x 1050 @ 60Hz	1400 x 1050 @ 60Hz
1440 x 900 @ 60Hz	1440 x 900 @ 60Hz
1680 x 1050 @ 60Hz	1680 x 1050 @ 60Hz
1600 x 1200 @ 60Hz	1600 x 1200 @ 60Hz
1920 x 1080 @ 60Hz	1920 x 1080 @ 60Hz

RS232 Control Protocols



- ❖ There is a <CR> after all ASCII commands
- ❖ 0D is the HEX code for <CR> in ASCII code
- ❖ XX=01-99, 3D projector adapter's ID, XX=00 is for all 3D projector adapters

Lead Code	3D Projector Adapter ID		Command ID			space	variable	carriage return
~	X	X	X	X	X		n	CR
Fix code	Set in 3D Projector Adapter		Defined by Optoma			One Digit	Per item	Fix code
One Digit	00-99 Two Digit		2 or 3 Digit See the follow content				Definition	One digit

RS232 Command Table(*)	
Baud Rate:	9600
Data Bits:	8
Parity Check:	None
Stop Bits:	1
Flow Control:	None
UART 16550 FIFO:	Disable
3D projector adapter Return (Fail):	F
3D projector adapter Return (Pass):	P

SEND to 3D projector adapter

ASCII Code	HEX Code	Function	Description
~XX00 1	7E 30 30 30 30 20 31 0D	Power ON	
~XX00 0	7E 30 30 30 30 20 30 0D	Power OFF	
~XX12 1	7E 30 30 31 32 20 31 0D	Direct Source Command	HDMI 1
~XX12 15	7E 30 30 31 32 20 31 35 0D	Direct Source Command	HDMI 2
~XX501 n	7E 30 30 35 30 31 20 a 0D	SBS Mode	n= 0 (a=30) Off, n= 1 (a=31) On
~XX502 n	7E 30 30 35 30 32 20 a 0D	3D Projector Adapter ID	n = 00 (a=30 30) ~ 99 (a=39 39)

SEND from 3D projector adapter automatically

ASCII Code	HEX Code	Function	3D Projector Adapter Return	Description
		when Standby/Warming	INFO n	n: 0/1 = Standby/Warming

READ / Return Information from 3D projector adapter




ASCII Code	HEX Code	Function	3D Projector Adapter Return	Description
~XX121 1	7E 30 30 31 32 31 20 31 0D	Input Source	OKn	n: 0/1/15 = None/HDMI 1/HDMI 2
~XX122 1	7E 30 30 31 32 32 20 31 0D	Software Version	OKdddd	dddd: FW version
~XX124 1	7E 30 30 31 32 34 20 31 0D	Power State	OKn	n: 0/1 = Off/On
~XX151 1	7E 30 30 31 35 31 20 31 0D	Model Name	OKn	n: 1 = 3D-XL
~XX152 1	7E 30 30 31 35 32 20 31 0D	RS232 Version No.	OKn	n: RS232 version No.
~XX504 1	7E 30 30 35 30 34 20 31 0D	Output 3D State	OKn	n: 0/1 = 2D/3D
~XX505 1	7E 30 30 35 30 35 20 31 0D	SBS State	OKn	n: 0/1 = Off/On

Optoma Global Offices

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Certification & Safety Notices

This appendix lists the general notices of your projector.

FCC Notice

This device has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the device and receiver.
- Connect the device into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Notice: Shielded cables

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations.

Caution

Changes or modifications not expressly approved by the manufacturer could void the user's authority, which is granted by the Federal Communications Commission, to operate this projector.

Operation Conditions

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference and
2. This device must accept any interference received, including interference that may cause undesired operation.

Notice: Canadian users

This Class B digital apparatus complies with Canadian ICES-003.

Remarque à l'intention des utilisateurs canadiens

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Declaration of Conformity for EU countries

- EMC Directive 2004/108/EC (including amendments)
- Low Voltage Directive 2006/95/EC
- R & TTE Directive 1999/5/EC (if product has RF function)



Disposal instructions

Do not throw this electronic device into the trash when discarding. To minimize pollution and ensure utmost protection of the global environment, please recycle it.

